

In the Office Action dated March 29, 2002, the Examiner made five anticipation rejections, and five obviousness rejections. Each of these rejections will now be addressed in turn.

Claims 1, 8, and 55 were rejected as anticipated by Voroba, 4,870,688; Schlaegel, 5,753,870; Weeks, 5,748,743; or Killion, 4,170,720. For the following reasons, this rejection is traversed.

In one aspect, the present invention represents a radically different paradigm for the design, manufacture, and use of hearing devices. The present invention recognizes and uniquely takes advantage of the fact that the various components in a hearing device can have different useful lives. For instance, the earmold of the present invention can be made with a shorter useful life than the base unit of the hearing aid, so that the earmold must be replaced on a more frequent basis than the replacement of the base unit. An advantage of this modular design is that the earmold can be made from a compliant material for added comfort, despite the fact that such a compliant material may reduce the useful life of the earmold to less than the useful life of the electronic components in the base unit. By making the earmold replaceable, however, the user can simply replace the relatively inexpensive earmold, and still gain the advantages inherent to a more comfortable earmold.

In the Voroba patent, the user is fitted with a pre-fabricated earshell assembly (12 in Fig. 2). The various electronic components comprising the hearing aid, including the microphone, receiver, battery, and associated electronics, are housed in a separate "amplification" module (101 in Fig. 2). The particular set of electronic components for the user's hearing aid is selected (preferably using a testing apparatus), and a final module containing these components is secured in the earshell. See, e.g., col. 4, line 40 to col. 5, line 53.

The Voroba hearing device is fundamentally different from the device of Claims 1 and 8. In particular, in the Voroba device, the base hearing aid module and the earshell assembly are designed to have the same useful life. In particular, once the base module is secured inside the earshell, neither component is intended to be easily replaced. On the contrary, in the event that a user must replace either component (for repairs, physical discomfort, etc.), the two components can only be separated using a special "tool." See, e.g., col. 7, lines 45-50; Fig. 7.

Also, the earshell of Voroba includes a rigid core or shell to which soft conforming layers are "fixedly secured." See, e.g., col. 7, lines 5-8. This design can add to the durability and useful life of the Voroba earshell, meaning that it can survive normal usage for approximately the duration as the electronic components in the amplification module. The tradeoff, however, is that the rigid core design can result in user discomfort.

The Voroba patent does not teach or suggest a removable earmold made of a compliant material having a shorter useful life than the useful life of the base unit, as in Claims 1 and 8.

Moreover, the Killion and Schlaegel patents relate to a different type of hearing aid entirely, where the electrical components of the hearing aid are located in a separate "earhook" located outside of the ear. By contrast, the present invention relates to an "in-the-ear"-type hearing aid.

Also, the Weeks patent is directed to a hearing aid with a covering designed to protect the interior of the device from earwax build-up interference. It does not teach or suggest, however, a removable earmold made of a compliant material having a shorter useful life than the useful life of the base unit, as in Claims 1 and 8.

Accordingly, it is submitted that Claims 1 and 8 are neither anticipated nor rendered obvious by any of these references.

Regarding the rejection of Claim 55, none of the cited references teach or suggest a covering for a hearing aid having an earmold comprising a compliant material, a shell integrated with the earmold which can attach to a hearing aid base unit, and a battery mounted within the covering and outside the hearing aid base unit. In each of the cited references, on the other hand, the battery is shown housed inside the base unit of the hearing aid. See, e.g. Voroba, Figs. 1 & 2; Weeks, Figs. 1 & 9; Schlaegel, Fig. 1; and Killion, Fig. 1.

Claims 9 and 10 were rejected as anticipated by Voroba or Weeks. Claims 9 and 10 depend from independent Claim 1. Accordingly, for the reasons set forth above in connection with Claim 1, it is submitted that these claims are patentable over the cited references.

Claims 56 and 57 were rejected as anticipated by Voroba, Weeks, or Killion. Claim 56 depends from independent Claim 55. Accordingly, for the reasons set forth above in connection with Claim 55, it is submitted that Claim 56 is likewise patentable over the cited references. Regarding Claim 57, none of the cited references teach or suggest a covering for a hearing aid

having an earmold comprising a compliant material, a shell integrated with the earmold which can attach to a hearing aid base unit, and a receiver mounted within the covering and outside the hearing aid base unit. In each of the cited references, on the other hand, the receiver is shown housed inside the base unit of the hearing aid. See, e.g. Voroba, Figs. 1 & 2 (receiver 70 housed in "amplification module" 101); Weeks, Figs. 1 & 9; and Killion, Fig. 1.

Claims 11-19, 23, 24, and 44-47 were rejected as anticipated by Voroba. For the following reasons, this rejection is traversed.

As discussed above, the Voroba patent discusses a particular device having a pre-fitted earshell assembly 12, and a separate base unit 101 (i.e. "amplification module") which contains the active electronic components and controls for the hearing device. Upon fitting, a particular earshell assembly 12 and amplification module 101 can be matched together to meet the particular requirements of a patient. Although after use, the amplification module and earshell of Voroba can be physically separated from one another and replaced, this is only done in the event of an unanticipated condition (such as physical discomfort or a sound response anomaly), and even then this can only be accomplished with the use of a special "tool." See, e.g., col. 7, lines 45-50. Clearly, this is not a disposable modular hearing aid, where various components are intended to be easily replaceable after use.

Claim 11, for instance, recites a modular hearing aid comprising a base unit adapted to contain typical hearing aid components such as a microphone, a receiver, a battery, or electronics, an earmold made of a compliant material that is removably attached to base unit so that the earmold can be replaced after use, and a module comprising a shell and electronics that is removably attached to both the base unit and the earmold so that the module can be replaced after use. This is neither taught nor suggested by Voroba, which discusses a hearing aid having only two arguably "modular" components, an earshell assembly 12 and an amplification module 101, that are intended to be permanently attached, and are separable from one another only with the use of a special tool. Also, the replaceable module having a shell and electronics, as recited in Claim 11, permits the hearing aid performance to be periodically improved by replacing the electronics module with a new module incorporating the latest advancements in hearing aid electronics (such as integrated circuits), without having to replace the entire hearing aid. See Specification at page 16, line 28 to page 17 line 9. This is also not taught or suggested in

Voroba. Accordingly, it is believed that Claim 11 and its dependents, Claims 12-19, are allowable.

Claim 23 recites a method for replacing a base unit of a modular hearing aid comprising providing a modular hearing aid having a base unit and an earmold, releasing a securing mechanism between the base unit and earmold, the securing mechanism capable of being released by a user without the use of a separate tool or instrument, removing and discarding the base unit, placing a second base unit onto the earmold, and attaching the securing mechanism. Voroba, on the other hand, discusses a hearing aid having an amplification module and earshell that can be physically separated from one another and replaced, but only in the event of an unanticipated condition (such as physical discomfort or a sound response anomaly), and only with the use of a special "tool." Accordingly, it is believed that Claim 23 is allowable.

Claim 24 recites a method for replacing a component of a modular hearing aid comprising providing a modular hearing aid having a base unit component, an earmold component and a module component; releasing a securing mechanism and removing one of the components from the modular hearing aid; discarding the component; replacing the component; and attaching the securing mechanism. As discussed above in connection with Claim 11, Voroba discloses a hearing aid having only two arguably "modular" components, and does not teach or suggest a hearing aid having a base unit, an earmold, and a module. Similarly, Voroba fails to teach or suggest a method for replacing a component in such a device. Accordingly, it is believed that Claim 24 is allowable.

Turning now to Claims 44-47, independent Claim 44 has been amended to recite that the hearing aid is disposable. Claim 45 has been cancelled.

As noted in the present Specification at page 23, line 10, *et seq.*, mechanical and acoustical feedback in a hearing aid can be reduced by potting the inside of the hearing aid with a material, such as an epoxy, that increases the mass of the hearing aid. However, this approach is not always ideal, because a hearing aid which is potted renders required repairs on the hearing aid very expensive, since the repairer must work through the potting material to reach the components to be repaired or replaced.

The present invention, however, recognizes that potting is an ideal solution for the problems of mechanical and acoustical feedback in the context of a disposable hearing aid. A

disposable hearing aid includes non-replaceable components, such as a non-replaceable battery. Thus, a disposable hearing aid can advantageously utilize a potting material surrounding such non-replaceable components without suffering the disadvantages of using potting materials in the context of a conventional hearing aid. In a disposable hearing aid, the repairer does not need to work through potting material to reach non-replaceable components—the hearing aid is simply discarded and replaced with a new device.

Regarding the Examiner's statement that Voroba discloses a disposable hearing aid, the applicant must respectfully disagree. In fact, the portion of the patent cited by the Examiner discloses exactly the opposite—i.e. that the Voroba hearing device is a conventional, non-disposable hearing aid. Column 7, lines 45-50 of Voroba, for instance, teaches that when an unanticipated condition is experienced with the hearing aid, either the earshell assembly 12 or the amplification module 101 is exchanged or replaced. The device of Voroba is therefore not a disposable hearing aid. With a disposable hearing aid, the entire device is discarded and replaced when such an unexpected condition is encountered.

Accordingly, it is believed that Claims 44 and 46-47 are allowable.

Claims 48-50 were rejected as anticipated by Voroba, WO93/25053, or Birkholz, 4,840,249. Independent Claim 48 has been amended to recite a disposable hearing aid comprising a hearing aid portion with a shell containing a battery, a receiver, a microphone and electronics; a flexible core attached to the hearing aid portion and forming a sound bore to allow sound produced by the hearing aid portion to travel to the ear canal; and a compliant tip portion adapted to be inserted into an ear canal, where the tip portion comprises layers of fingers surrounding the flexible core and wherein the fingers are adapted to bend, twist, and interleave to form an acoustic seal in the ear canal. Claim 49 has been cancelled.

It is believed that the present amendment to Claim 48 places this claim and its dependents in condition for allowance. Specifically, the cited Voroba WO93/25053 publication does not teach or suggest a compliant tip portion comprised of layers of fingers adapted to bend, twist, and interleave to form an acoustic seal in the ear canal. On the contrary, the Voroba publication discloses only a tip portion having a series of flanges, as shown in Fig. 1. Similarly, the Birkholz reference also fails to teach or suggest this feature. Birkholz discloses an ear button (25 in Fig. 3) that can be used to test a hearing module. See col. 2, lines 44-56.

Turning now to the obviousness rejections, Claims 1-10 were rejected as obvious over Deithelm, 3,852,540 in combination with Voroba, 4,870,688. For the following reasons, it is believed that this rejection is overcome.

The Diethelm reference discloses a hearing apparatus having an elongate two-part housing. The first part of the housing 1 includes a transducer 5 and sound tube 6. The second housing part or component 2 includes the microphone 15 and electrical components of the amplifier 14. Between the first and second parts of the device is a space for the voltage source (i.e. battery) 8. Diethelm teaches that the first and second part of the housing may be separated in order to "remov[e] or exchange [] the voltage source." See col. 4, lines 10-13.

As the Examiner acknowledged in the Office Action, Diethelm does not disclose an earmold comprising a compliant material, as presently claimed. Moreover, it is further submitted that Diethelm does not teach or suggest an earmold that can be connected to a base unit or removed and replaced after use. On the contrary, Diethelm appears to teach that the first and second housings are non-replaceable components, and are only to be separated temporarily for the limited purpose of changing the battery.

Finally, there is no teaching or suggestion whatsoever that the device can include an earmold of a compliant material that has a shorter useful life than the useful life of the base unit.

Regarding the Voroba patent, the hearing device disclosed therein is fundamentally different from the device of Claim 1, as described in detail above. More particularly, the base hearing aid "amplification module" and the earshell assembly of Voroba are designed to have the same useful life. In contrast to the compliant earmold of the present invention, the earshell of Voroba includes a rigid core or shell to which softer layers are fixedly secured. This is consistent with an earshell having a long useful life (i.e. equivalent to that of the electronics in the base unit), and which is not intended to be replaced more frequently than the base unit. Indeed, Voroba teaches that the "amplification module" and earshell can only be separated during aberrant conditions, and only then with the use of a special tool. The present invention, on the other hand, employs a less durable earshell design for added user comfort, with the intention that the earshell will need to be replaced on a more frequent basis than the base unit. This is neither taught nor suggested by Diethelm or Voroba, either alone or in combination. Accordingly, it is believed Claim 1, and its dependents, Claims 8-10, are allowable.

Claim 2 of the present invention recites a base unit adapted to contain any of a microphone, receiver, electronics, and controls; and a removable earmold of a compliant material, where the earmold comprises a battery integrated with the earmold.

According to one aspect, the invention advantageously integrates the battery of the hearing aid with a removable and replaceable earmold made from a compliant material. By integrating the replaceable earmold with the battery, the user can simultaneously provide a comfortable, sterile covering and a fresh power source for a modular hearing aid. The frequent replacement of the earmold/battery can provide the user with an optimum level of comfort, cleanliness, performance, and economy. Also, integrating the battery with the earmold can help overcome some of the problems inherent in handling and replacing the small batteries used in hearing aids. With the present invention, the battery can be more easily handled and replaced by the user, as the integrated battery and earmold is larger than the battery alone. See Specification at page 11, lines 19-28.

As noted above, however, Diethelm does not teach or suggest a replaceable earmold comprised of a compliant material. Moreover, Diethelm fails to teach or suggest a battery integrated with the replaceable, compliant earmold. Rather, Diethelm teaches that the power source is housed in a cylindrical recess between the first housing part and the second housing part. The battery is not integral with either component, however, and is designed to be replaced independently of any other component in the device.

In Voroba, the battery is located in the "amplification module," at the opposite end of the device from the earshell component. Like in Diethelm, the battery is designed to be independently replaced. It is not integral with any other components, and is certainly not integral with a replaceable compliant earmold.

As neither of the cited references teach or suggest a replaceable compliant earmold having an integral battery, it is believed that Claim 2 and its dependent, Claim 3, are allowable.

Claim 4 of the present invention recites a base unit adapted to contain any of a microphone, electronics, and controls; and a removable earmold of a compliant material, where the earmold comprises both a battery and a receiver integrated with the earmold.

For the reasons discussed above in connection with Claim 2, it is believed that Claim 4 and its dependent, Claim 5, are also allowable, as neither of the cited references teaches or suggests a replaceable compliant earmold having an integral battery and receiver.

Claim 6 of the present invention recites a base unit adapted to contain any of a microphone, battery, electronics, and controls; and a removable earmold of a compliant material, where the earmold comprises both a receiver and a shell, where the receiver is housed in the shell and the shell is integrated with the earmold. The integration of the compliant earmold and the receiver allows the receiver to be placed deep inside the ear canal (particularly due to the soft and flexible earmold) in order to achieve the highest effective sound pressure levels possible. Also, the receiver is very prone to damage, such as when the hearing aid is dropped from a height of several feet onto a hard surface. By integrating the receiver with the replaceable earmold, a damaged receiver can be easily replaced by the user by simply replacing the entire earshell.

The cited Diethelm patent fails to teach or suggest an earmold comprising a compliant material, or an earmold that can be connected to a base unit or removed and replaced after use. Diethelm also fails to teach or suggest a replaceable receiver. Also, the cited Voroba patent teaches that the receiver is located within “amplification module” 101, and is not integrated with a removable compliant earshell. Accordingly, it is believed that Claim 6 and its dependent, Claim 7, are allowable.

Claims 20 and 21 were rejected as obvious over Diethelm in combination with Voroba and Knudsen, 2,246,737. It is believed that the arguments made with respect to Claims 2 and 4 apply equally to Claims 20 and 21. In particular, as discussed above, the Diethelm and Voroba references fail to teach or suggest a suggest a replaceable compliant earmold having an integral battery (Claim 20), or a replaceable compliant earmold having an integral battery and receiver (Claim 21). The Knudsen reference also fails to teach or suggest these features, as Knudsen relates exclusively to ear stoppers (i.e. ear plugs), rather than the hearing aids of the present invention.

Moreover, none of the cited references teach or suggest a flexible, mushroom-shaped earmold tip adapted to create a seal with the bony region of an ear canal to acoustically isolate the hearing aid base unit from acoustical vibrations created by the receiver. The Knudsen reference relates to the entirely different subject matter of ear plugs, which do not extend deep

into the ear to the bony region of the ear canal. Moreover, there is no suggestion in Knudson that the design of the ear plugs disclosed therein could be employed in a hearing device. The Diethelm and Voroba references, on the other hand, fail to teach or suggest any flexible tip member secured to the earmold.

Accordingly, it is believed that Claims 20 and 21 are allowable.

Claims 22, 25 and 31-35 were rejected as obvious over Voroba or Diethelm. For the following reasons, it is believed that these rejections are overcome.

Regarding Claim 22, which recites a method for replacing an earmold of a modular hearing aid, it is submitted that the two cited references relate to hearing aids where the components most closely corresponding to the earmold of Claim 22 (i.e. the earshell 12 in Voroba, and the first housing 1 in Diethelm) are not at all intended to be removed, discarded, and replaced with a second earmold, as presently claimed. Diethelm discloses that the first and second housings may be separated for the limited purpose of replacing the battery, which is housed in a recess between the two housings. However, there is no teaching or suggestion that the first housing can be removed, discarded and replaced with a new housing. Similarly, Voroba teaches that the earshell can only be separated from the amplification module during aberrant conditions, and only then with the use of a special tool. There is no teaching or suggestion that the earshell can be removed, discarded, and replaced with a new earshell. Moreover, Voroba teaches that the earshell and amplification module can only be separated with the use of a special tool, while present Claim 22 recites releasing a securing mechanism between the earmold and the base unit, where the securing mechanism is capable of being released by a user without the use of a separate tool or instrument. Accordingly, it is believed that neither of the cited references can render Claim 22 obvious.

Regarding the rejection of Claim 25, applicant fails to see how Diethelm in any way teaches or suggests a flexible tip, or a vibration isolator portion having a receiver, as presently claimed. Diethelm discloses a hearing device having a first housing, a second housing, a covering over the second housing, and a protective cap attached to the first housing which protects the sound outlet opening. Diethelm does not teach or suggest a tip or any other component which is flexible, nor does Diethelm teach that the receiver is within a vibration isolator portion of the flexible tip.

Also, the Voroba reference discloses a hearing aid having an earshell 12 and an amplification module 101. Voroba teaches that the earshell comprises a rigid core or shell to which compliant layers are fixedly attached. Voroba in no way teaches or suggests a flexible tip as presently claimed.

Furthermore, Voroba teaches that the receiver 70 is located in the amplification module 101. This is in direct contrast to the present invention, which discloses that the receiver is within a vibration isolator portion of the flexible tip of the device, rather than in the base unit (i.e. amplification module) of the hearing device. According to the present invention, the receiver is placed away from the base unit in order to mechanically decouple the receiver from the electrical components in the base unit (particularly the microphone), and thus reduce mechanical feedback.

Accordingly, it is believed that Claim 25 and its dependents, Claims 26-35, are all allowable.

Claims 26-30 and 36-43 were rejected as obvious over Diethelm in combination with Knudsen. Claims 26-30 depend from Claim 25, and the patentability of this claim with respect to Diethelm was discussed above. Also, the Knudsen reference is directed to a design for an ear plug, and is not relevant to the flexible hearing aid tip with vibration isolator portion of the present claims. Accordingly, it is believed that Claims 26-30 are allowable.

Claim 36 recites a hearing aid comprising, *inter alia*, a flexible hearing aid tip having a vibration isolator portion including a receiver, and a mushroom shaped tip portion adapted to create a seal with an ear canal to acoustically isolate the hearing aid base unit from acoustical vibrations created by the receiver. The patentability of the mushroom shaped tip limitation over Diethelm and Knudson was discussed in connection with Claims 20 and 21, and these same reasons apply equally to Claim 36. Accordingly, it is believed that Claim 36 and its dependents, Claims 37-41, are allowable.

Claim 42 recites a method for attenuating feedback in a hearing aid comprising, *inter alia*, placing the hearing aid within an ear such that a flexible mushroom shaped tip portion of the hearing aid creates a seal with the bony portion of the ear canal to acoustically isolate the hearing aid base unit from acoustical vibrations created by the receiver. For the reasons discussed above in connection with Claims 20, 21, and 36, it is believed that Claim 42 is likewise allowable.

Finally, Claim 22 was rejected as obvious over Voroba, Schlaegel, Weeks, or Killion. The Examiner acknowledges that none of the references teaches releasing a securing mechanism, removing the earmold, discarding the earmold, placing a second earmold on the base unit, and attaching the securing mechanism. For the missing teachings, the Examiner takes official notice of the facts that it is known to remove an earmold for cleaning, and that is known for earmolds to tear and become brittle and need replacing after prolonged use. Based upon these facts, the Examiner then asserts that it would have been obvious to arrive at the method presently claimed.

However, even if the facts officially noticed are true (which applicants do not concede), it is respectfully submitted that the prior art still fails to teach or suggest the claimed method. In fact, it is submitted that the strongest evidence against a finding of obviousness is within the cited references themselves. In particular, the conventional in-the-ear type hearing device, such as the devices disclosed in Voroba and Weeks, the earmold is intended to be a permanent component of the hearing aid, and thus have a useful life approximately equal to the useful life of the other components, including the electrical components, in the base unit of the hearing aid. Thus, if the earmold and base unit are able to be separated at all, it is only under aberrant conditions, such as physical discomfort or sound response anomaly (Voroba), or if the earmold accidentally gets separated from the device during removal from the ear canal (Weeks), or perhaps if the device needs cleaning, as the Examiner suggests. However, in no way is it taught or suggested in these references that the earmold is removed by the user without the use of a special tool, discarded, and replaced with a second earmold, as presently claimed. Indeed, it would be illogical to remove an earmold for cleaning, as the Examiner suggests, and then discard the cleaned earmold and replace it with another. Rather, the implication of these references is that the hearing aid continues to include the original earmold for the useful life of the entire device. Thus, when the device itself becomes irreparably defective, (i.e. the base unit fails, or the earmold "tears and becomes brittle" as the Examiner suggests), then the device itself is replaced *in toto*. However, there is no teaching or suggestion that the earmold alone is a replaceable, interchangeable component, independent of the base unit of the device.

Moreover, the other cited references, Schlaegel and Killion, relate to a "behind the ear" type device, rather than the in-the-ear-type device of the present invention, and are thus very

different from the present invention. In any event, it is noted that neither of these references teach or suggest in any way that the earmold is a replaceable component.

Accordingly, it is believed that Claim 22 is allowable.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned at (978) 341-0036.

Respectfully submitted,

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MARKED UP VERSION OF AMENDMENTSClaim Amendments Under 37 C.F.R. § 1.121(c)(1)(ii)

1. (Amended) A modular in-the-ear-type hearing [air] aid comprising:
 - a base unit adapted to contain any of a microphone, a receiver, a battery, electronics and controls, and wherein the base unit can be replaced after use; and
 - an earmold removably attached to the base unit, the earmold comprising a compliant material and having a shorter useful life than the useful life of the base unit, the earmold further comprising a retention mechanism for connection to the base unit such that the earmold can be connected to the base unit or removed from the base unit and replaced after use on a more frequent basis than the replacement of the base unit.
2. (Amended) A modular hearing [air] aid comprising:
 - a base unit adapted to contain any of a microphone, a receiver, electronics and controls; and
 - an earmold removably attached to the base unit, the earmold comprising a compliant material, a retention mechanism for connection to the base unit such that the earmold can be connected to the base unit or removed from the base unit and replaced after use, and the earmold comprising a battery integrated with the earmold.
4. (Amended) A modular hearing [air] aid comprising:
 - a base unit adapted to contain any of a microphone, electronics and controls; and
 - an earmold removably attached to the base unit, the earmold comprising a compliant material, a retention mechanism for connection to the base unit such that the earmold can be connected to the base unit or removed from the base unit and replaced after use, and the earmold comprising both a battery and a receiver integrated with the earmold.
6. (Amended) A modular hearing [air] aid comprising:
 - a base unit adapted to contain any of a microphone, a battery, electronics and controls;

and

an earmold removably attached to the base unit, the earmold comprising a compliant material, a retention mechanism for connection to the base unit such that the earmold can be connected to the base unit or removed from the base unit and replaced after use, and the earmold comprising a receiver and a shell, the shell integrated with the earmold and the receiver housed within the shell.

20. (Amended) A modular hearing [air] aid comprising:

a base unit adapted to contain a microphone, a receiver, electronics and controls; and
an earmold comprising a compliant material integrated with a battery, the earmold having a flexible, mushroom shaped earmold tip [and] adapted to create a seal with the bony portion of the ear canal to acoustically isolate the hearing aid base unit from acoustical vibrations created by the receiver, the earmold tip further comprising a retention mechanism for connection to the base unit such that the earmold can be connected to the base unit or removed from the base unit and replaced after use.

21. (Amended) A modular hearing aid comprising:

a base unit adapted to contain a microphone and electronics; and
an earmold comprising a compliant material integrated with a battery and a receiver, the earmold having a flexible, mushroom shaped earmold tip [and] adapted to create a seal with the bony portion of the ear canal to acoustically isolate the hearing aid base unit from acoustical vibrations created by the receiver, the earmold tip further comprising a retention mechanism for connection to the base unit such that the earmold can be connected to the base unit or removed from the base unit and replaced after use.

22. (Amended) A method for replacing an earmold of a modular in-the-ear-type hearing aid comprising the steps:

providing a modular hearing aid having a base unit and an earmold;
releasing a securing mechanism between the earmold and the base unit, the securing mechanism capable of being released by a user without the use of a separate tool or

instrument;

removing the earmold from the base unit;
discarding the earmold;
placing a second earmold onto the base unit; and
attaching the securing mechanism.

23. (Amended) A method for replacing a base unit of a modular hearing aid comprising the steps:
providing a modular hearing aid having a base unit and an earmold;
releasing a securing mechanism between the earmold and the base unit, the securing mechanism capable of being released by a user without the use of a separate tool or instrument;
removing the base unit from the earmold;
discarding the base unit;
placing a second base unit onto the earmold; and
attaching the securing mechanism.

25. (Amended) A flexible earmold tip for a hearing aid comprising:
a vibration isolator portion adapted for attachment [within] to a hearing aid, the vibration isolator portion having a receiver disposed therein and wherein the receiver includes a diaphragm adapted to vibrate in operation creating acoustical vibrations which cause the receiver to mechanically vibrate and wherein the vibration isolation portion attenuates such mechanical vibrations from the receiver.

36. (Amended) A hearing aid comprising:
a hearing aid base unit having a microphone, a battery and electronics; and
a flexible earmold tip having a vibration isolator portion, a mushroom shaped tip portion adapted to create a seal with an ear canal to acoustically isolate the hearing aid base unit from acoustical vibrations created by a receiver, and a sound bore, the vibration isolator portion enclosed by the base unit and having [a] the receiver electrically attached to the base unit wherein the receiver includes a diaphragm adapted to vibrate in operation causing the

receiver to mechanically vibrate and wherein the vibration isolation portion attenuates vibrations from the receiver, the mushroom shaped tip portion being attached to the vibration isolator portion, and the sound bore formed between the vibration isolator portion and the mushroom shaped tip portion and the sound bore providing a channel for the transfer of sound from the receiver to an ear canal of a user.

42. (Amended) A method for attenuating feedback in a hearing aid comprising:

providing a hearing aid base unit, a receiver, and a hearing aid tip having a flexible mushroom shaped tip portion and vibration isolator portion;

surrounding the receiver with the vibration isolator portion to attenuate acoustic vibrations and mechanical vibrations created by the receiver during operation; [and]

securing the vibration isolator portion and receiver within the hearing aid base unit;
and

placing the hearing aid within an ear such that the mushroom shaped tip portion creates a seal with the bony portion of the ear canal to acoustically isolate the hearing aid base unit from acoustical vibrations created by the receiver.

44. (Amended) A disposable hearing aid comprising:

a base unit having an inside portion, the base unit adapted to contain a non-replaceable component, including any of a microphone, a receiver, a battery, electronics and controls; and

a potting material which pots at least a portion of the inside portion of the base unit, wherein the material increases the mass of the hearing aid and wherein the material attenuates vibrations created by the receiver during operation.

47. (Amended) A method for reducing feedback in a disposable hearing aid comprising:

providing a hearing aid having an inside portion adapted to contain a non-replaceable component, including any of a microphone, a receiver, a battery, electronics and controls;

potting at least a portion of the inside portion of the hearing aid with a material, thereby increasing the mass of the hearing aid;

attenuating vibrations created by the receiver during operation through the increased mass of the hearing aid; and

reducing feedback in the hearing aid by attenuating vibrations created by the receiver.

48. (Amended) A disposable hearing aid comprising:

a hearing aid portion wherein the hearing aid portion comprises a shell containing a battery, a receiver, a microphone and electronics;

a flexible core attached to the hearing aid portion, the flexible core forming a sound bore, thereby allowing sound produced by the hearing aid portion to travel to the ear canal; and

a compliant tip portion adapted to be inserted into an ear canal, wherein the tip portion [surrounds] comprises layers of fingers surrounding the flexible core and wherein the [tip portion forms] fingers are adapted to bend, twist, and interleave to form an acoustic seal in the ear canal.

51. (Amended) [The disposable hearing aid of Claim 48] A disposable hearing aid comprising:

a hearing aid portion wherein the hearing aid portion comprises a shell containing a battery, a receiver, a microphone and electronics;

a flexible core attached to the hearing aid portion, the flexible core forming a sound bore, thereby allowing sound produced by the hearing aid portion to travel to the ear canal; and

a compliant tip portion adapted to be inserted into an ear canal, wherein the tip material comprises a fluid-filled bladder surrounding the flexible core.

55. (Amended) A covering for a hearing aid comprising:

an earmold comprising a compliant material;

a shell integrated with the earmold wherein the shell allows the attachment of a hearing aid base unit; and

a battery mounted within the covering and outside the hearing aid base unit.

57. (Amended) A covering for a hearing aid comprising:

- an earmold comprising a compliant material;
- a shell integrated with the earmold wherein the shell allows the attachment of a hearing aid base unit; and
- a receiver mounted within the covering and outside the hearing aid base unit.